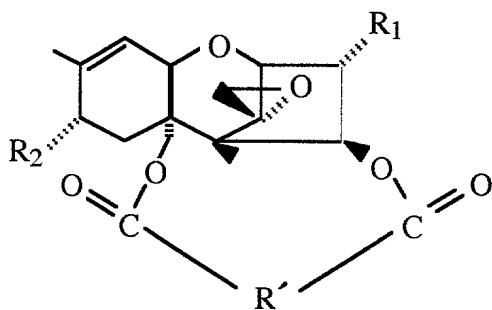


## CLAIMS

I Claim:

1. A method of inhibiting the proliferation of, or reducing cell populations of, neoplasms in the lungs of humans or non-human animals, comprising administration by inhalation of therapeutically effective amounts of compound(s) containing a central sesquiterpene epoxide structure.
2. The method of claim 1 wherein said compound(s) are trichothecene(s).
3. The method of claim 2 wherein said trichothecene(s) are a compound or compounds having the following structure(s):



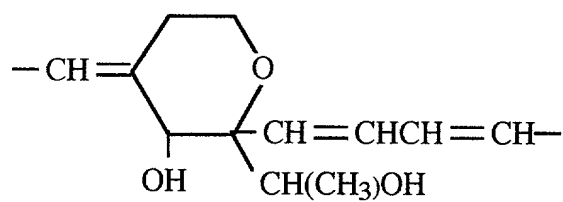
Wherein  $R_1$  is OH, or  $\text{OC}-\text{CH}_3$ ;

$R_2$  is H, OH,  $\text{O}-\text{C}(=\text{O})-\text{CH}_3$  or  $\text{OCOCH}_2\text{CH}(\text{CH}_3)_2$ ; and

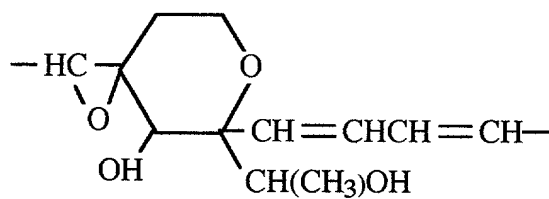
$R'$  is any molecule composed predominantly, or in its entirety, of combinations of C, H, and O:

Some representative examples of  $R'$  include:

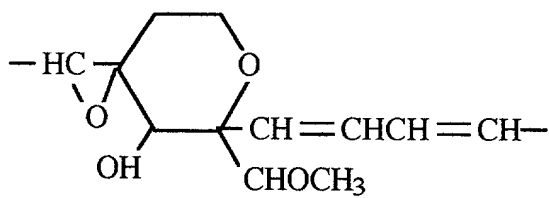
Satratoxin H:



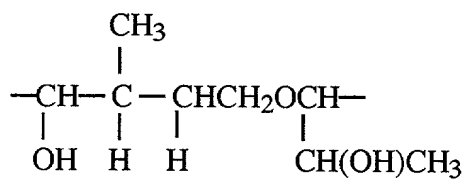
Satratoxin G:



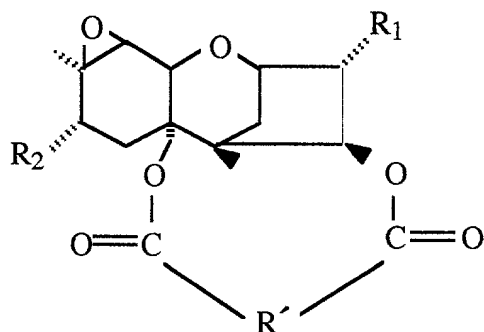
Satratoxin F:



Roridin A:



or molecules of the following general formula:

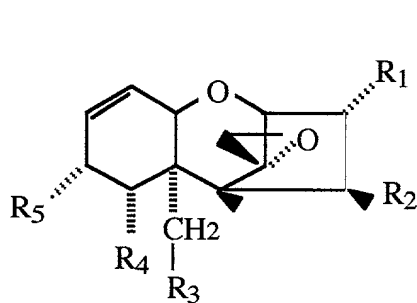


Wherein  $R_1$  is H, OH, or  $O-C(=O)CH_3$ ;

$R_2$  is H, OH,  $O-C(=O)CH_3$  or  $OCOCH_2CH(CH_3)_2$ ; and

$R'$  is any molecule composed predominantly, or in its entirety, of combinations of C, H, and O.

or molecules of the following general formula:



Wherein  $R_1$  is H, OH, or  $O-C(=O)CH_3$ ;

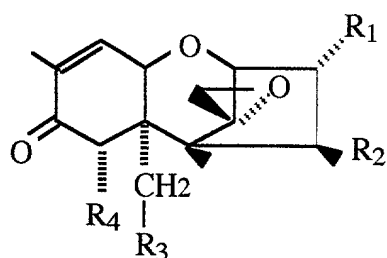
$R_2$  is H, OH, or  $O-C(=O)CH_3$ ;

$R_3$  is H, OH, or  $O-C(=O)CH_3$ ;

$R_4$  is H or OH; and

$R_5$  is H, OH,  $O-C(=O)CH_3$  or  $C(=O)O-CH_2(CH_3)_2$ .

or molecules of the following general formula:



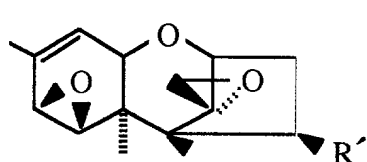
Wherein R<sub>1</sub> is H, OH, or  $\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$ ;

R<sub>2</sub> is H, OH,  $\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$  or  $\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}=\text{CH}-\text{CH}_3$ ;

R<sub>3</sub> is H, OH, or  $\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$ ;

R<sub>4</sub> is H, OH, or  $\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}_3$ ;

or molecules of the following general formula:



Wherein R' is OH or  $\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{CH}=\text{CH}-\text{CH}_3$ .

4. The method of claims 1 through 3 wherein said compound(s) are fragments or sub-units of a sesquiterpene epoxide or trichothecene, which still possess the biological activity of inhibiting protein synthesis.
5. A method of chemical debridement or chemexfoliation for lung tissue comprising administration, by inhalation, of therapeutically effective amounts of compound(s) containing a central sesquiterpene epoxide structure.
6. The method of claims 5 wherein said compound(s) are trichothecene, or fragments or sub-units of a sesquiterpene epoxide or trichothecene, which still possess the biological activity of inhibiting protein synthesis.
7. A method of inhibiting or preventing inflammation in the lungs comprising administration, by inhalation, of therapeutically effective amounts of compound(s) containing a central

[illegible]

- [illegible]